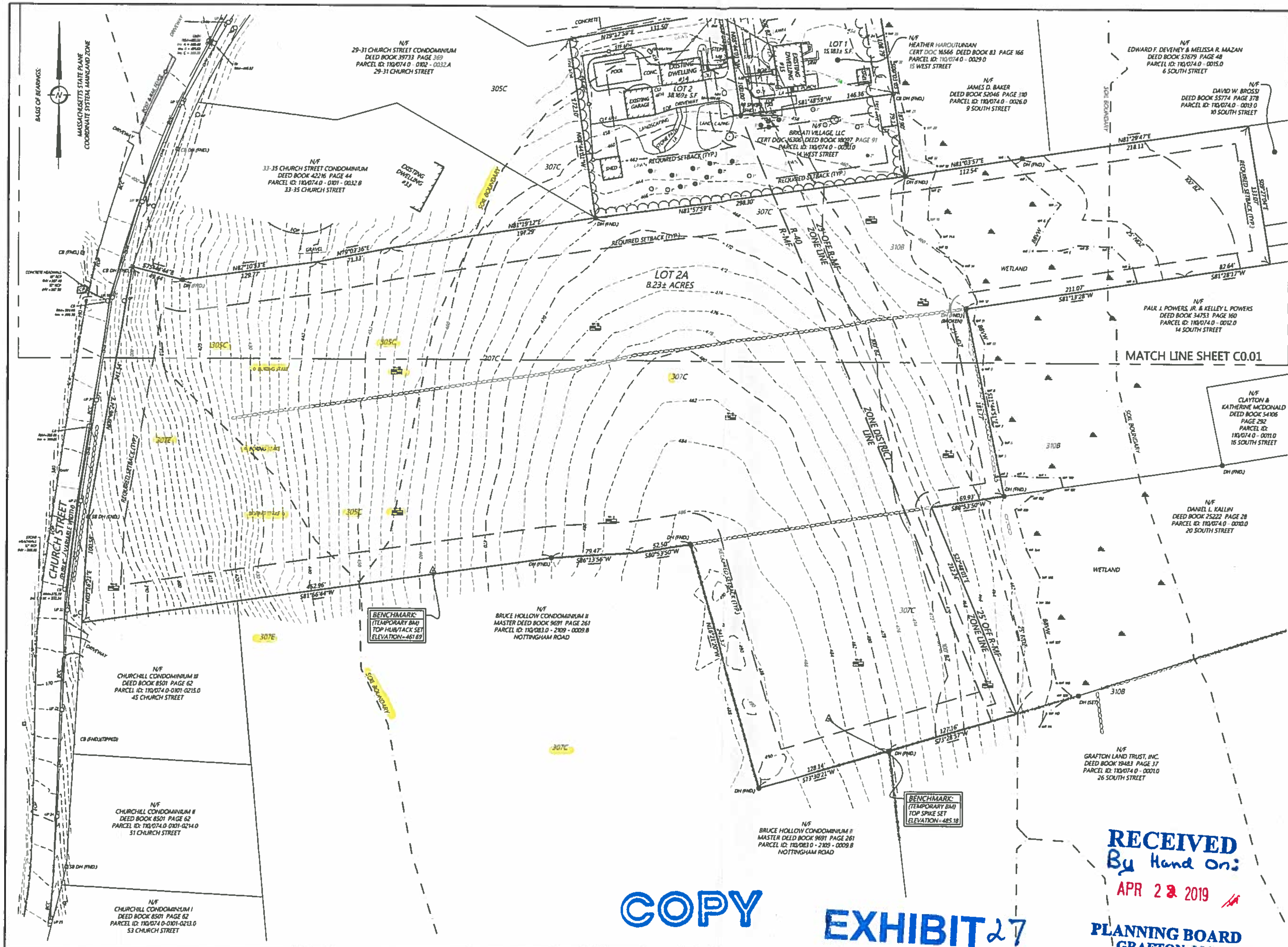
BASIS OF BEARINGS:
MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE
N/F
29-31 CHURCH STREET CONDOMINIUM
DEED BOOK 39733 PAGE 369
PARCEL ID: 110/074.0 - 0102 - 0032.A
29-31 CHURCH STREET
N/F
33-35 CHURCH STREET CONDOMINIUM
DEED BOOK 42216 PAGE 44
PARCEL ID: 110/074.0 - 0101 - 0032.B
33-35 CHURCH STREET
EXISTING DWELLING #33
LOT 1
15,183± S.F.
LOT 2
38,169± S.F.
EXISTING DWELLING #14
EXISTING DWELLING #15
EXISTING GARAGE
POOL
SHED
N/F
BRIGATI VILLAGE, LLC
CERT DOC 16306 DEED BOOK 18097 PAGE 91
PARCEL ID: 110/074.0 - 0030.0
14 WEST STREET
N/F
HEATHER HAROUTUNIAN
CERT DOC 16566 DEED BOOK 83 PAGE 166
PARCEL ID: 110/074.0 - 0029.0
15 WEST STREET
N/F
JAMES D. BAKER
DEED BOOK 52046 PAGE 310
PARCEL ID: 110/074.0 - 0026.0
9 SOUTH STREET
N/F
EDWARD F. DEVENEY & MELISSA R. MAZAN
DEED BOOK 57679 PAGE 48
PARCEL ID: 110/074.0 - 0015.0
6 SOUTH STREET
N/F
DAVID W. BROSSI
DEED BOOK 55774 PAGE 378
PARCEL ID: 110/074.0 - 0013.0
10 SOUTH STREET
REQUIRED SETBACK (TYP.)
LOT 2A
8.23± ACRES
R-40
R-MF
25' OFF R-MF ZONE LINE
ZONE DISTRICT LINE
SOIL BOUNDARY
WETLAND
N/F
PAUL J. POWERS, JR. & KELLEY L. POWERS
DEED BOOK 34753 PAGE 160
PARCEL ID: 110/074.0 - 0012.0
14 SOUTH STREET
MATCH LINE SHEET C0.01
N/F
CLAYTON & KATHERINE MCDONALD
DEED BOOK 54106
PAGE 292
PARCEL ID:
110/074.0 - 0011.0
16 SOUTH STREET
N/F
DANIEL L. KALLIN
DEED BOOK 25222 PAGE 28
PARCEL ID: 110/074.0 - 0010.0
20 SOUTH STREET
CHURCH STREET
N/F
CHURCHILL CONDOMINIUM III
DEED BOOK 8501 PAGE 62
PARCEL ID: 110/074.0-0101-0215.0
45 CHURCH STREET
N/F
CHURCHILL CONDOMINIUM II
DEED BOOK 8501 PAGE 62
PARCEL ID: 110/074.0-0101-0214.0
51 CHURCH STREET
N/F
CHURCHILL CONDOMINIUM I
DEED BOOK 8501 PAGE 62
PARCEL ID: 110/074.0-0101-0213.0
53 CHURCH STREET
BENCHMARK:
(TEMPORARY BM)
TOP HUB/TACK SET
ELEVATION=461.69
N/F
BRUCE HOLLOW CONDOMINIUM II
MASTER DEED BOOK 9691 PAGE 261
PARCEL ID: 110/083.0 - 2109 - 0009.B
NOTTINGHAM ROAD
BENCHMARK:
(TEMPORARY BM)
TOP SPIKE SET
ELEVATION=485.18
N/F
GRAFTON LAND TRUST, INC.
DEED BOOK 19483 PAGE 37
PARCEL ID: 110/074.0 - 0001.0
26 SOUTH STREET

COPY

EXHIBIT 27

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APR 22 2019
PLANNING BOARD
GRAFTON, MA

LOCUS MAP
N.T.S.

REV	DATE	DESCRIPTION	INIT.
A		INITIAL ISSUE	

PATRICK J. SCHOLLARD No. 48436 REGISTERED PROFESSIONAL LAND SURVEYOR
2-7-19

PREPARED BY:

WDA DESIGN GROUP
31 EAST MAIN STREET WESTBOROUGH, MA | 508.366.4552
7 CENTRAL STREET PROVIDENCE, RI | 401.274.1360
WDA-DG.COM

OWNERS:
DAVID W. BROSSI
15 Juniper Lane
Grafton, MA 01519
BRIGATI VILLAGE, LLC
15 Juniper Lane
Grafton, MA 01519

PREPARED FOR:
BRIGATI VILLAGE, LLC
15 Juniper Lane
Grafton, MA 01519

TITLE:
EXISTING CONDITIONS PLAN

"BRIGATI VILLAGE"
41 CHURCH STREET/
14 WEST STREET
Grafton, MA
(Worcester County)

LOCAL PERMITTING

SCALE: 1" = 40'
0 40 80 120

JOB NO.: 1046.05	DATE: 02/07/19
DWN. BY: JRZ	SHEET:
CHK'D. BY: PJS	C1.02

Submitted by D.A. Vellone 22 April 2019 Grafton Planning Board Meeting

Table 7–1 Criteria for assignment of hydrologic soil groups when a water impermeable layer exists at a depth between 50 and 100 centimeters [20 and 40 inches]

Soil property	Hydrologic soil group A	Hydrologic soil group B	Hydrologic soil group C	Hydrologic soil group D
Saturated hydraulic conductivity of the least transmissive layer	>40.0 µm/s (>5.67 in/h)	≤40.0 to >10.0 µm/s (≤5.67 to >1.42 in/h)	≤10.0 to >1.0 µm/s (≤1.42 to >0.14 in/h)	≤1.0 µm/s (≤0.14 in/h)
	and	and	and	and/or
Depth to water impermeable layer	50 to 100 cm [20 to 40 in]	50 to 100 cm [20 to 40 in]	50 to 100 cm [20 to 40 in]	<50 cm [<20 in]
	and	and	and	and/or
Depth to high water table	60 to 100 cm [24 to 40 in]	60 to 100 cm [24 to 40 in]	60 to 100 cm [24 to 40 in]	<60 cm [<24 in]

Table 7–2 Criteria for assignment of hydrologic soil groups when any water impermeable layer exists at a depth greater than 100 centimeters [40 inches]

Soil property	Hydrologic soil group A	Hydrologic soil group B	Hydrologic soil group C	Hydrologic soil group D
Saturated hydraulic conductivity of the least transmissive layer	>10 µm/s (>1.42 in/h)	≤10.0 to >4.0 µm/s (≤1.42 to >57 in/h)	≤4.0 to >0.40 µm/s (≤0.57 to >0.06 in/h)	≤0.40 µm/s (≤0.06 in/h)
	and	and	and	and/or
Depth to water impermeable layer	>100 cm [>40 in]	>100 cm [>40 in]	>100 cm [>40 in]	>100 cm [>40 in]
	and	and	and	and/or
Depth to high water table	>100 cm [>40 in]	>100 cm [>40 in]	>100 cm [>40 in]	>100 cm [>40 in]

from essentially 0 micrometers per second (0 inches per hour) to 0.9 micrometers per second (0.1 inches per hour). For simplicity, either case is considered impermeable for hydrologic soil group purposes. In some cases, saturated hydraulic conductivity (a quantitatively measured characteristic) data are not always readily available or obtainable. In these situations, other soil properties such as texture, compaction (bulk density), strength of soil structure, clay mineralogy, and organic matter are used to estimate water movement. Tables 7–1 and 7–2 relate saturated hydraulic conductivity to hydrologic soil group.

The four hydrologic soil groups (HSGs) are described as:

Group A—Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil. Group A soils typically have less than 10 percent clay and more than 90 percent sand or gravel and have gravel or sand textures. Some soils having loamy sand, sandy loam, loam or silt loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

The limits on the diagnostic physical characteristics of group A are as follows. The saturated hydraulic conductivity of all soil layers exceeds 40.0 micrometers per second (5.67 inches per hour). The depth to any water impermeable layer is greater than 50 centimeters [20 inches]. The depth to the water table is greater than 60 centimeters [24 inches]. Soils that are deeper than 100 centimeters [40 inches] to a water impermeable layer are in group A if the saturated hydraulic conductivity of all soil layers within 100 centimeters [40 inches] of the surface exceeds 10 micrometers per second (1.42 inches per hour).

Group B—Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded. Group B soils typically have between 10 percent and 20 percent clay and 50 percent to 90 percent sand and have loamy sand or sandy loam textures. Some soils having loam, silt loam, silt, or sandy clay loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

The limits on the diagnostic physical characteristics of group B are as follows. The saturated hydraulic conductivity in the least transmissive layer between the surface and 50 centimeters [20 inches] ranges from 10.0 micrometers per second (1.42 inches per hour) to 40.0 micrometers per second (5.67 inches per hour). The depth to any water impermeable layer is greater than 50 centimeters [20 inches]. The depth to the water table is greater than 60 centimeters [24 inches]. Soils that are deeper than 100 centimeters [40 inches] to a water impermeable layer or water table are in group B if the saturated hydraulic conductivity of all soil layers within 100 centimeters [40 inches] of the surface exceeds 4.0 micrometers per second (0.57 inches per hour) but is less than 10.0 micrometers per second (1.42 inches per hour).

Group C—Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted. Group C soils typically have between 20 percent and 40 percent clay and less than 50 percent sand and have loam, silt loam, sandy clay loam, clay loam, and silty clay loam textures. Some soils having clay, silty clay, or sandy clay textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

The limits on the diagnostic physical characteristics of group C are as follows. The saturated hydraulic conductivity in the least transmissive layer between the surface and 50 centimeters [20 inches] is between 1.0 micrometers per second (0.14 inches per hour) and 10.0 micrometers per second (1.42 inches per hour). The depth to any water impermeable layer is greater than 50 centimeters [20 inches]. The depth to the water table is greater than 60 centimeters [24 inches]. Soils that are deeper than 100 centimeters [40 inches] to a restriction or water table are in group C if the saturated hydraulic conductivity of all soil layers within 100 centimeters [40 inches] of the surface exceeds 0.40 micrometers per second (0.06 inches per hour) but is less than 4.0 micrometers per second (0.57 inches per hour).

Group D—Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted. Group D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clayey textures. In some areas, they also have high shrink-swell potential. All soils with a depth to a water impermeable layer less than 50 centimeters [20 inches] and all soils with a water table

within 60 centimeters [24 inches] of the surface are in this group, although some may have a dual classification, as described in the next section, if they can be adequately drained.

The limits on the physical diagnostic characteristics of group D are as follows. For soils with a water impermeable layer at a depth between 50 centimeters and 100 centimeters [20 and 40 inches], the saturated hydraulic conductivity in the least transmissive soil layer is less than or equal to 1.0 micrometers per second (0.14 inches per hour). For soils that are deeper than 100 centimeters [40 inches] to a restriction or water table, the saturated hydraulic conductivity of all soil layers within 100 centimeters [40 inches] of the surface is less than or equal to 0.40 micrometers per second (0.06 inches per hour).

Dual hydrologic soil groups—Certain wet soils are placed in group D based solely on the presence of a water table within 60 centimeters [24 inches] of the surface even though the saturated hydraulic conductivity may be favorable for water transmission. If these soils can be adequately drained, then they are assigned to dual hydrologic soil groups (A/D, B/D, and C/D) based on their saturated hydraulic conductivity and the water table depth when drained. The first letter applies to the drained condition and the second to the undrained condition. For the purpose of hydrologic soil group, adequately drained means that the seasonal high water table is kept at least 60 centimeters [24 inches] below the surface in a soil where it would be higher in a natural state.

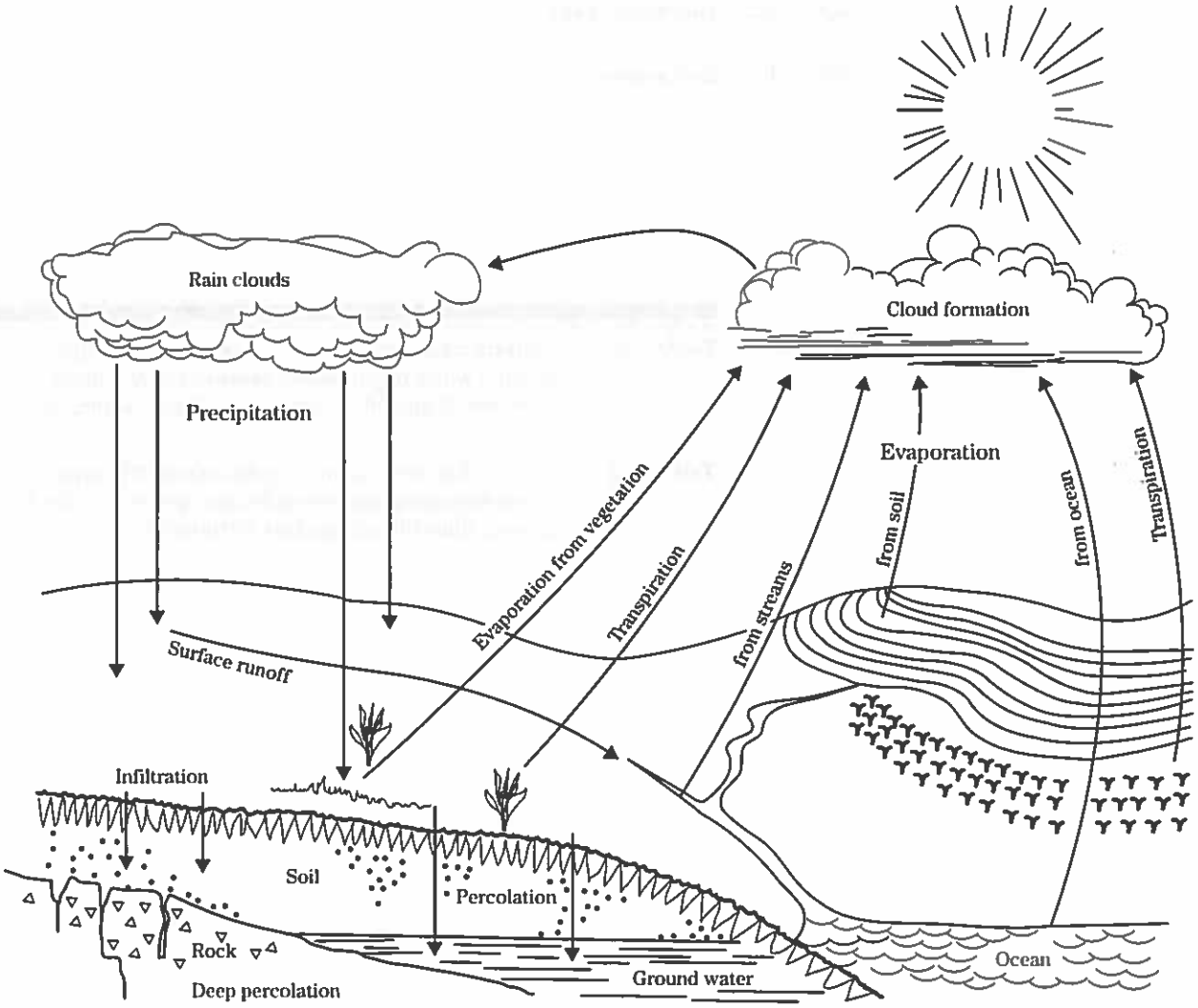
Matrix of hydrologic soil group assignment criteria—The decision matrix in tables 7–1 and 7–2 can be used to determine a soil's hydrologic soil group. Check both tables before making a final decision. If saturated hydraulic conductivity data are available and deemed to be reliable, then these data, along with water table depth information, should be used to place the soil into the appropriate hydrologic soil group. If these data are not available, the hydrologic soil group is determined by observing the properties of the soil in the field. Factors such as texture, compaction (bulk density), strength of soil structure, clay mineralogy, and organic matter are considered in estimating the hydraulic conductivity of each layer in the soil profile. The depth and hydraulic conductivity of any water impermeable layer and the depth to any high water table are used to determine correct hydrologic soil group for the soil. The property that is most limiting to water movement generally determines the soil's hydrologic group. In anomalous situations, when adjustments to hydrologic soil group become necessary, they shall be made by the NRCS state soil scientist in consultation with the state conservation engineer.

United States
Department of
Agriculture

**Natural
Resources
Conservation
Service**

Part 630 Hydrology
National Engineering Handbook

Chapter 7 Hydrologic Soil Groups



Chapter 7 Hydrologic Soil Groups

Contents:

Tables

Worcester County, Massachusetts, Southern Part

305C—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w66y
Elevation: 0 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Natural drainage class: Well drained
Runoff class: Medium
⇒ *Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.14 in/hr)
⇒ *Depth to water table:* About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C

Hydrologic Soil Group D.

Hydrologic Soil Group C/D

Submitted by D.A. Vellante Grafton Planning Board meeting 22 April 2019

Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent
Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Footslope, summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent
Landform: Ground moraines, depressions, drainageways, drumlins, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Subsurface Water Management, System Performance—Worcester County, Massachusetts, Southern Part
(41 Church St - Subsurface Water Management, System Performance)

Map Scale: 1:3,510 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/1/2019
Page 1 of 2

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GRAFTON, MA

Grafton Planning Board meeting 22 April 2019 Submitted by D.A. Vellante

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2014—Sep 28, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Subsurface Water Management, System Performance

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
245B	Hinckley loamy sand, 3 to 8 percent slopes	Very limited	Hinckley (85%)	Drainage not required (1.00)	0.2	0.4%
				Too acid (0.14)		
				Clogging of tiles with sand (0.02)		
			Windsor (8%)	Drainage not required (1.00)		
				Clogging of tiles with sand (0.98)		
			Sudbury (5%)	Clogging of tiles with sand (1.00)		
			Agawam (2%)	Drainage not required (1.00)		
				Clogging of tiles with sand (1.00)		
305B	Paxton fine sandy loam, 3 to 8 percent slopes	Very limited	Paxton (80%)	Slow water movement (1.00)	3.3	6.4%
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Woodbridge (9%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Ridgebury (6%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.38)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Charlton (5%)	Drainage not required (1.00)		
				Clogging of tiles with sand (1.00)		
305C	Paxton fine sandy loam, 8 to 15 percent slopes	Very limited	Paxton (85%)	Slow water movement (1.00)	19.0	36.5%
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Charlton (7%)	Drainage not required (1.00)		
				Clogging of tiles with sand (1.00)		
			Woodbridge (6%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Ridgebury (2%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.38)		
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	Very limited	Paxton, extremely stony (85%)	Slow water movement (1.00)	11.8	22.7%
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Charlton, extremely stony (8%)	Drainage not required (1.00)		
				Clogging of tiles with sand (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Woodbridge, extremely stony (6%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Ridgebury, extremely stony (1%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.38)		
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	Very limited	Paxton, extremely stony (75%)	Slow water movement (1.00)	11.5	22.1%
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Charlton, extremely stony (20%)	Drainage not required (1.00)		
				Clogging of tiles with sand (1.00)		
			Woodbridge, extremely stony (4%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Ridgebury, extremely stony (1%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.38)		
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	Very limited	Woodbridge, fine sandy loam (82%)	Slow water movement (1.00)	6.2	11.9%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Paxton (10%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.62)		
			Ridgebury (8%)	Slow water movement (1.00)		
				Dense layer (1.00)		
				Clogging of tiles with sand (0.38)		
Totals for Area of Interest					**52.1**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	52.1	100.0%
Totals for Area of Interest	**52.1**	**100.0%**

Description

The ratings for Subsurface Water Management, System Performance are based on the soil properties that affect the capacity of the soil to be drained. The properties that affect the subsurface system performance include depth to a water table, salinity, flooding, sodicity, sand content, soil reaction, hydraulic conductivity, soil density, gypsum content, and subsidence.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as that listed for the map unit. The percent composition of each component in a particular map unit is given so that the user will realize the percentage of each map unit that has the specified rating.

A map unit may have other components with different ratings. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Water Table—Worcester County, Massachusetts, Southern Part

Map Scale: 1:2,410 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

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PLANNING BOARD
GRAFTON, MA

Grafton Planning Board Meeting 22 April 2019 Submitted by P.A. Vellone

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features
- Streams and Canals

Transportation
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- Interstate Highways
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- Aerial Photography

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Warning: Soil Map may not be valid at this scale.

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Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2014—Sep 28, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
245B	Hinckley loamy sand, 3 to 8 percent slopes	20	0.0	0.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	20	0.0	0.0%
305C	Paxton fine sandy loam, 8 to 15 percent slopes	8	7.6	28.0%
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	8	8.3	30.6%
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	8	11.2	41.1%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	8	0.1	0.3%
Totals for Area of Interest			**27.2**	**100.0%**

hydrologic soil Group → D

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Minimum or Maximum

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

Depth to Water Table—Worcester County, Massachusetts, Southern Part

Map Scale: 1:2,410 if printed on A portrait (8.5" x 11") sheet.

N

0 35 70 140 210 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Grafton Planning Board Meeting 22 April 2019 Submitted by D.A. Vellone

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2014—Sep 28, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
245B	Hinckley loamy sand, 3 to 8 percent slopes	48	0.0	0.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	48	0.0	0.0%
305C	Paxton fine sandy loam, 8 to 15 percent slopes	59	7.6	28.0%
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	65	8.3	30.6%
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	65	11.2	41.1%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	46	0.1	0.3%
Totals for Area of Interest			**27.2**	**100.0%**

Hydrologic soil Group → D

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Weighted Average

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

Depth to Any Soil Restrictive Layer—Worcester County, Massachusetts, Southern Part

Map Scale: 1:2,410 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 35, 70, 140, 210

Feet: 0, 100, 200, 400, 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

Grafton Planning Board Meeting 22 April 2019 Submitted by D.A. Vellone

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2014—Sep 28, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Any Soil Restrictive Layer

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
245B	Hinckley loamy sand, 3 to 8 percent slopes	66	0.0	0.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	66	0.0	0.0%
305C	Paxton fine sandy loam, 8 to 15 percent slopes	46	7.6	28.0%
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	49	8.3	30.6%
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	49	11.2	41.1%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	46	0.1	0.3%
Totals for Area of Interest			**27.2**	**100.0%**

Hydrologic Soil Group → D

Description

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Minimum or Maximum

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Saturated Hydraulic Conductivity (Ksat)—Worcester County, Massachusetts, Southern Part

Map Scale: 1:2,410 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/22/2019
Page 1 of 4

RECEIVED
APR 22 2019
PLANNING BOARD
GRAFTON, MA

Grafton Planning Board Meeting 22 April 2019 Submitted by D.A. Vellone

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- <= 0.5760
- > 0.5760 and <= 1.0083
- > 1.0083 and <= 1.5279
- > 1.5279 and <= 100.0000
- Not rated or not available

Soil Rating Lines
- <= 0.5760
- > 0.5760 and <= 1.0083
- > 1.0083 and <= 1.5279
- > 1.5279 and <= 100.0000
- Not rated or not available

Soil Rating Points
- <= 0.5760
- > 0.5760 and <= 1.0083
- > 1.0083 and <= 1.5279
- > 1.5279 and <= 100.0000
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts, Southern Part
Survey Area Data: Version 11, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 12, 2014—Sep 28, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
245B	Hinckley loamy sand, 3 to 8 percent slopes	100.0000	0.0	0.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	100.0000	0.0	0.0%
305C	Paxton fine sandy loam, 8 to 15 percent slopes	0.5760	7.6	28.0%
307C	Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony	1.0083	8.3	30.6%
307E	Paxton fine sandy loam, 15 to 35 percent slopes, extremely stony	1.0083	11.2	41.1%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	1.5279	0.1	0.3%
Totals for Area of Interest			**27.2**	**100.0%**

hydrologic Soil Group D.

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 24

Bottom Depth: 100

Units of Measure: Inches

Grafton Planning Board meeting 22 April 2019

D.A. Vellone

Possible TP-9 as viewed from Churchill Condo III 4/20/2019 @ 1:41pm.

Commonwealth of Massachusetts
City/Town of GRAFTON
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: B15 09

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0"-8"	Ap	10YR 3/2				SANDY LOAM					
8"-28"	B10	10YR 5/4	24"	7.5YR 5/6	5%						
28"-103"	C1	2.5Y 6/3						10%			CRUMBLY

Additional Notes:

MOIST AND A LITTLE SLIMY

Exh. 6 PDF page 125/134

weather.gov

Weather observations for the past three days

Worcester, Worcester Regional Airport

Enter Your "City, ST" or zip code 01519 Go

metric

Date	Time (edt)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F) Air	Dwpt	6 hour Max.	Min.	Relative Humidity	Wind Chill (°F)	Heat Index (°F)	Pressure altimeter (in)	sea level (mb)	Precipitation (in.) 1 hr	3 hr	6 hr
22	16:54	NE 13 G 23	2.50	Heavy Rain Fog/Mist	BKN005 OVC008	52	51			97%	NA	NA	30.01	1016.4	0.27	0.59	
22	15:54	NE 14 G 24	4.00	Rain Fog/Mist	BKN003 OVC049	52	52			100%	NA	NA	30.01	1016.5	0.25		
22	14:54	E 13	5.00	Rain Fog/Mist	OVC055	52	49			89%	NA	NA	30.04	1017.5	0.07		
22	13:54	E 8	10.00	Overcast	FEW027 OVC060	59	49	61	55	69%	NA	NA	30.04	1017.5			
22	12:54	NE 7	10.00	Overcast	OVC060	60	50			70%	NA	NA	30.04	1017.5			
22	11:54	NE 12 G 20	10.00	Overcast	FEW018 SCT065 OVC100	59	51			75%	NA	NA	30.06	1018.1			
22	10:54	NE 9 G 18	10.00	Mostly Cloudy	BKN016 BKN100	60	52			75%	NA	NA	30.07	1018.5			
22	09:54	NE 10	10.00	Mostly Cloudy	FEW020 BKN100	58	51			78%	NA	NA	30.08	1018.9			
22	08:54	NE 12	10.00	Overcast	FEW020 OVC110	56	51			84%	NA	NA	30.09	1019.2			
22	07:54	NE 8	10.00	Overcast	OVC095	54	50	54	48	87%	NA	NA	30.09	1019.3			
22	06:54	N 8	10.00	Overcast	BKN024 OVC110	53	49			86%	NA	NA	30.09	1019.0			
22	05:54	NW 6	10.00	Partly Cloudy	SCT110	51	49			92%	NA	NA	30.08	1018.5			
22	04:54	NW 7	10.00	A Few Clouds	FEW110	51	48			89%	NA	NA	30.07	1018.5			
22	03:54	NW 5	10.00	Fair	CLR	50	48			93%	48	NA	30.09	1018.9			
22	02:54	W 3	10.00	Fair	CLR	50	48			93%	NA	NA	30.10	1019.2			
22	01:54	W 6	10.00	Fair	CLR	50	48	57	50	93%	48	NA	30.10	1019.6			
22	00:54	W 3	10.00	Fair	CLR	50	49			96%	NA	NA	30.12	1020.0			
21	23:54	SW 5	10.00	A Few Clouds	FEW016	51	50			96%	NA	NA	30.12	1020.1			
21	22:54	SW 6	10.00	A Few Clouds	FEW014	52	51			97%	NA	NA	30.12	1020.2			
21	21:54	Calm	10.00	Partly Cloudy	SCT021	54	51			90%	NA	NA	30.11	1019.7			
21	20:54	SW 3	10.00	Fair	CLR	54	51			90%	NA	NA	30.11	1019.8			
21	19:54	SW 7	10.00	Fair	CLR	57	51	65	57	81%	NA	NA	30.09	1019.2			
21	18:54		10.00		SCT055	59	51			75%	NA	NA	30.07	1018.6			

		SW 12 G 21		Partly Cloudy													
21	17:54	SW 7	10.00	Overcast	SCT028 BKN033 OVC065	62	52			70%	NA	NA	30.05	1017.6			
21	16:54	S 10	10.00	Light Rain	BKN037 BKN043 OVC055	63	53			70%	NA	NA	30.02	1016.8			
21	15:54	S 10	10.00	Mostly Cloudy	FEW029 SCT048 BKN065	64	53			68%	NA	NA	30.03	1016.8			
21	14:54	S 9	10.00	Mostly Cloudy	FEW023 FEW031 BKN046	63	53			70%	NA	NA	30.03	1016.9			
21	13:54	E 6	10.00	Overcast	OVC018	61	55	61	54	81%	NA	NA	30.03	1016.9			0.01
21	12:54	SE 10	10.00	Overcast	OVC070	60	54			80%	NA	NA	30.02	1016.6			
21	11:54	SE 9	10.00	Overcast	BKN015 OVC070	59	53			81%	NA	NA	30.04	1017.2			
21	10:54	Calm	10.00	Overcast	BKN070 OVC085	57	53			87%	NA	NA	30.03	1017.0		0.01	
21	09:54	Vrbl 3	10.00	Overcast	OVC070	57	54			90%	NA	NA	30.02	1016.6			
21	08:54	SW 7	10.00	Light Rain	OVC065	54	53			97%	NA	NA	30.01	1016.4	0.01		
21	07:54	S 10	10.00	Light Rain	OVC075	54	52	55	53	93%	NA	NA	30.02	1016.6	0.01		0.01
21	06:54	S 5	10.00	Overcast	FEW050 OVC075	53	52			96%	NA	NA	29.99	1015.7			
21	05:54	S 3	10.00	Overcast	OVC075	53	53			100%	NA	NA	29.97	1014.7			
21	04:54	S 8	10.00	Overcast	FEW055 OVC085	53	52			96%	NA	NA	29.95	1014.2			
21	03:54	SW 7	10.00	Overcast	BKN003 OVC075	53	53			100%	NA	NA	29.95	1014.3			
21	02:54	S 8	10.00	Overcast	OVC060	54	53			97%	NA	NA	29.95	1014.1			
21	01:54	S 5	10.00	Overcast	FEW018 FEW026 OVC038	55	54	62	55	96%	NA	NA	29.94	1013.8	0.04		0.05
21	00:54	S 12	5.00	Light Rain Fog/Mist	BKN006 BKN018 OVC023	57	56			96%	NA	NA	29.94	1013.8	0.01		
20	23:54	S 10 G 20	10.00	Overcast	BKN008 BKN013 OVC036	57	56			96%	NA	NA	29.94	1013.7			
20	22:54	S 15	10.00	Overcast	FEW013 OVC045	59	56			90%	NA	NA	29.95	1014.3			
20	21:54	S 18 G 24	10.00	A Few Clouds	FEW009 FEW090	60	57			90%	NA	NA	29.92	1013.1			
20	20:54	S 14 G 29	10.00	Overcast	OVC004	62	61			96%	NA	NA	29.92	1013.0			
20	19:54	SE 14 G 23	10.00	Overcast	OVC005	61	61	66	61	100%	NA	NA	29.91	1012.6	0.12		0.12
20	18:54	S 14	10.00	Light Rain	OVC009	62	61			96%	NA	NA	29.90	1012.5			

20	17:54	S 16 G 28	10.00	Light Rain	OVC013	64	61			90%	NA	NA	29.90	1012.2			
20	16:54	S 20 G 36	10.00	Overcast	OVC012	65	61			87%	NA	NA	29.87	1011.4			
20	15:54	S 23 G 32	10.00	A Few Clouds and Breezy	FEW023	65	59			81%	NA	NA	29.86	1011.0			
20	14:54	S 21 G 33	10.00	Overcast and Breezy	BKN009 OVC014	64	61			90%	NA	NA	29.87	1011.4			

PR. 1:54pm.

20	13:54	S 16 G 26	10.00	Light Rain	BKN010 OVC014	65	63	65	61	93%	NA	NA	29.86	1011.0			0.36
20	12:54	S 17 G 32	4.00	Light Rain Fog/Mist	BKN007 OVC015	65	64			97%	NA	NA	29.87	1011.4	0.04		
20	11:54	S 17 G 24	5.00	Light Rain Fog/Mist	OVC005	64	63			96%	NA	NA	29.88	1011.6	0.04		
20	10:54	S 16 G 25	9.00	Light Rain	OVC006	62	61			96%	NA	NA	29.88	1011.7	0.17	0.28	
20	09:54	S 15 G 23	3.00	Rain Fog/Mist	BKN005 OVC008	62	61			96%	NA	NA	29.87	1011.3	0.11		
20	08:54	S 12	10.00	Overcast	BKN003 OVC008	62	62			100%	NA	NA	29.84	1010.2			
20	07:54	S 13 G 22	10.00	Overcast	BKN007 OVC010	63	62	64	62	97%	NA	NA	29.82	1009.6			0.11
20	06:54	S 13	10.00	Overcast	BKN008 OVC012	62	61			96%	NA	NA	29.80	1009.0	0.03		
20	05:54	S 12 G 22	9.00	Light Rain	OVC006	62	61			96%	NA	NA	29.80	1008.9	0.02		
20	04:54	SW 14 G 24	10.00	Light Rain	SCT009 OVC014	63	61			93%	NA	NA	29.78	1008.1	0.01	0.06	
20	03:54	S 18 G 26	10.00	Overcast	OVC008	64	62			93%	NA	NA	29.76	1007.5	0.04		
20	02:54	S 23 G 31	8.00	Light Rain and Breezy	BKN008 OVC011	64	63			96%	NA	NA	29.76	1007.4	0.01		
20	01:54	S 17	6.00	Light Rain Fog/Mist	OVC005	64	63	65	62	96%	NA	NA	29.77	1007.7	0.07		0.17
20	00:54	S 18 G 30	5.00	Light Rain Fog/Mist	OVC005	63	62			97%	NA	NA	29.78	1008.1	0.01		
19	23:54	S 17 G 28	6.00	Light Rain Fog/Mist	OVC005	63	62			97%	NA	NA	29.79	1008.5	0.04		
19	22:54	S 14 G 23	4.00	Light Rain Fog/Mist	OVC006	63	62			97%	NA	NA	29.81	1009.2	0.05	0.05	
19	21:54	S 16 G 25	10.00	Light Rain	OVC007	63	62			97%	NA	NA	29.83	1009.8			
19	20:54		10.00	Overcast	OVC013	64	61			90%	NA	NA	29.83	1009.9			

0.64" Rainfall Registered on Apr. 20

		S 18 G 26													
19	19:54	SW 21 G 30	10.00	Overcast and Breezy	OVC016	65	60	71	65	84%	NA	NA	29.82	1009.6	
19	18:54	SW 18 G 26	10.00	Overcast	OVC019	66	59			78%	NA	NA	29.80	1009.0	
19	17:54	SW 22 G 32	10.00	Overcast and Breezy	OVC021	67	58			73%	NA	NA	29.80	1008.9	

Date	Time (edt)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F) Air	Dwpt	Max. 6 hour	Min. 6 hour	Relative Humidity	Wind Chill (°F)	Heat Index (°F)	Pressure altimeter (in.)	Pressure sea level (mb)	Precipitation (in.) 1 hr	3 hr	6 hr